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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,443	09/29/2003	Richard A. Falcioni	6674P001	4131
8791 7590 09/18/2007 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER WANG, JIN CHENG	
			ART UNIT 2628	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/674,443

**Applicant(s)**

FALCIONI, RICHARD A.

**Examiner**

Jin-Cheng Wang

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 21-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

Applicant's submission, filed 7/23/2007, has been considered. Claims 8-20 and 34-42 have been canceled. Claims 1, 21-29 and 33 have been amended. Claims 1-7 and 21-33 are pending in the present application.

***Response to Argument***

Applicant's arguments, filed 7/23/2007, have been considered but are not moot in view of the new ground of rejection.

It is acknowledged that, due to a typo, claim 33 was inadvertently omitted in the prior Office Action. The claim 33 is addressed in the present Office Action. Since the rationale of rejection follows from the prior Office Action, the examiner has made the finality of rejection in the present Office Action.

With regards to the 112 rejection, applicant argues in essence with respect to the claim 21 and similar claims that the claimed "regions" or "zones" are broadly construed and should be broadly interpreted in light of applicant's specification. The examiner agrees that the claimed regions or zones are broadly construed and are subject to the broadest reasonable interpretation in consistent with applicant's specification. Although applicant has addressed some issues in the prior Office Action, other issues raised in the prior Office Action are not addressed by applicant, as addressed below.

The claim 21 recites the claim limitation of “a respective selection of one or more regions from a plurality of regions that abut one another thereby eliminating intervening spaces to form a control area that is essentially a solid block.”

First, the claimed “intervening spaces” and “a solid block” are broadly construed and the prior art reference teaches the claimed feature the reasons set forth in the present Office Action.

Applicant’s specification in Figs. 5-9 is related to a user’s selection (referred to as Mnemonic aids) of a combination of one or more regions from a plurality of regions. However, the plurality of regions is arranged without eliminating the intervening (white) spaces so that the distinct regions or zones can be selected. The claimed regions are given the broadest reasonable interpretation consistent with applicant’s specification, e.g., white regions and black regions are visualized in the Mnemonic aids of Figs. 5-9, and constituting the regions as claimed.

Since the white regions cannot be selected, the user’s selection of a combination of one or more regions are related to the one or more black regions, so that a change of the color of the selected black regions would map to an alphanumeric character as claimed. In this process, the color of the regions is essential with regards to the present claimed invention as the present claimed subject matter recites “the respective selection of regions are contrasted with the remainder of the plurality of regions”, wherein the regions are selected on a Mnemonic aid, rather than on the display of the resulting desired character. During the selection of a combination of one or more regions, no solid block is visualized, or presented to a user, as evidenced in Figs. 5-9. Applicant points to another embodiment disclosed in Fig. 10a wherein a solid block constituting a plurality of black dots regions are illustrated. However, Fig. 10a is the two-zone representation (display) of each graphic symbol, rather than the Mnemonic aid, for

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selection. Moreover, Fig. 10a has some solid block, but not a rectangular solid block, formed by a plurality black regions, after selection of the regions and thereby is not even related to the claimed “solid block” during the selection of the regions constructed for a mnemonic aid. Only Figs. 5-9 are employed during the selection of the regions as Mnemonic aids.

Applicant argues that the plurality of zones or regions may physically form a solid block or a rectangular solid block. However, applicant’s claims require the identification of remainder of the regions/zones versus the combination of the selected regions/zones in a Mnemonic aid. In the visualization of the selected regions or zones, the contrasting colors of the regions or zones play an important role in the identification of the remainder regions/zones or the selected regions/zones. In applicant’s specification, the selected regions or zones are indicated white while the other unselected regions or zones are visualized as black regions, and still other intervening white spaces or white regions remain within the rectangular block (See Figs. 5-9), during the selection of the one or more regions or zones from a plurality of regions or zones. With respect to the Mnemonic aids of the Figs. 5-9, it cannot be said that the collection of the black regions or zones forms a rectangular solid block before and during selection of the regions or zones. The contrasting colors determine the visualization or identification of the selection of the one or more regions or zones to be contrasted with the remainder of the regions or zones. The contrasting colors determine the desired alphanumeric character to be generated. Applicant cannot possibly ignore the contrasting colors, the white regions/zones before and during the selection of the one or more regions or zones. Although some of the white regions/zones are transformed to black regions/zones during the display of the generated alphanumeric symbols in

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Fig. 10a, it cannot be said that the collection of the black regions or zones forms a solid block or rectangular solid block.

Additionally, applicant's claimed "regions" and "zones" are different from one embodiment to another embodiment. For example, the regions and zones in Fig. 10a are clearly different from the regions and zones in Figs. 5-9. However, applicant argues collectively with respect to all the embodiments in the applicant's specification.

Finally, according to applicant's argument, claimed regions and/or zones do not refer to the zones in the 12-zone matrix set forth in Paragraph 0030 of applicant's specification, but rather referring to the features. In contrary to applicant's argument that the examiner raises the issue to confuse the applicant, the applicant's claims and specification are inconsistent and thus confusing.

For example, in Paragraph 0030 of applicant's specification, it is stated, "there may be 19 different features needed to compose all the letters of...a template or matrix is created based on the entire set of features, by **abutting the features** to each other in such a way that each feature can be **visually distinguished** from the others. *This template may then be overlayed with a smaller, second matrix (e.g., a 12-zone matrix)*...Each character is indicated by a respective selection of one or more (and in most cases, no more than two) regions or zones in a matrix." In Paragraph 0038, it is stated, "almost all of the assembled features are 'stretched' so that they abut one another, eliminating the intervening spaces and thereby resulting in a stretched matrix 208 in Fig. 2. Note also that the stretched features become the boundaries of the regions in the matrix 208 in such a way that most of the regions line up in rows and columns." However, Fig. 2 shows

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19 features. *The 19 features, rather than the selection regions*, have been stretched so that they abut one another, eliminating the intervening spaces. Moreover, according to applicant's Figs. 7, 8a and 9, the regions (the 12-zone matrix) are constructed with intervening spaces with the contrasting colors, and there is no way to form "a solid block" or essentially "a solid block" with the regions due to the separation of the regions in the 12-zone matrix (See Fig. 9 of applicant's specification) and also due to the separation of the 12 zones by some of the 19 features.

It is also uncertain what applicant is meant by the claimed zones and/or regions and what regions or zones in any of the Figs. 5-10a of applicant's specification should correspond to the claimed regions and/or zones.

In view of the art rejection, the examiner wishes to point out that Ramian teaches traced regions and untraced regions. *In Ramian, receiving a user's selection of the traced regions also indicates that a user's selection of the untraced regions as the untraced regions are contrasted with the traced zones and therefore, the untraced regions are also selected (albeit indirectly selected) and meeting the claim limitation of a combination of one or more regions or zones.*

Applicant argues that Curtin does not disclose a solid block. Again, applicant points to Fig. 10a of applicant's specification. As discussed above, Fig. 10a presents the two-zone representation (display) of each of the generated or the resulting graphic symbols and is not related to the Mnemonic aid for selecting the one or more zones/regions from a plurality of zones/regions. The Mnemonic aids are described in reference to Figs. 5-9.

Moreover, applicant's regions or zones are broadly construed, as pointed out by applicant. Based on Curtin's teaching, the bars are connected and the areas not occupied by the bars are also regions and thus collectively form a solid block or a rectangular solid block.

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Applicant's "solid block" merely indicates a physical dimension of a block, as argued by applicant with respect to the 112 rejection that the colors of the zones or regions constituting the solid block do not matter. However, applicant cannot ignore his own argument with respect to the art rejection set forth in the present Office Action. Moreover, Curtin at least discloses a solid rectangular bar and a collection of solid rectangular bars forming a solid block, or a collection of the bars together with the spaces/regions/zones in the area encompassed by the outside 6 bars form a physical area of the solid block. Since the claimed limitation of "solid block" is broadly construed, the interpretation is proper. Finally, it should be pointed out that Curtin's bars are not separated. The bars are connected. Curtin's Figs. 1 and 6 are just illustration and the fact that the bars are shaped so as to be connected and selected to describe a desired alphanumeric characters in a design of the structure or shape of the bars. Nowhere in Curtin's specification mention that the bars are separated.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the desired character" in line 18 of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim limitation "the desired character" should refer to "a desired alphanumeric character" set forth in the lines 1-2 of the



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claim. Clarification is required. The claims 2-7 depend upon the claim 1 and are rejected due to their dependency on the claim 1.

Claim 29 recites the limitation "said logic" in line 16 of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim limitation "said logic" should refer to "logic circuitry" set forth in the line 3 of the claim wherein logic describes circuitry. Clarification is required. The claims 30-32 depend upon the claim 29 and are rejected due to their dependency on the claim 29.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7, and 21-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

#### **Claims 21-28 and 33:**

The claim 21 recites the claim limitation of "a respective selection of one or more regions from a plurality of regions that abut one another thereby eliminating intervening spaces to form a control area that is essentially a solid block."

Applicant's specification in Figs. 5-9 is related to a user's selection (referred to as Mnemonic aids) of a combination of one or more regions from a plurality of regions. However,

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the plurality of regions is arranged without eliminating the intervening (white) spaces. The claimed regions are given the broadest reasonable interpretation in consistent with applicant's specification, e.g., white regions and black regions are visualized in the Mnemonic aids of Figs. 5-9, and constituting the regions as claimed.

Since the white regions cannot be selected, the user's selection of a combination of one or more regions are related to the one or more black regions, so that a change of the color of the selected black regions would map to an alphanumeric character as claimed. In this process, the color of the regions is essential with regards to the present claimed invention as the present claimed subject matter recites "the respective selection of regions are contrasted with the remainder of the plurality of regions". During the selection of a combination of one or more regions, no solid block is visualized, or presented to a user, as evidenced in Figs. 5-9. Applicant points to another embodiment disclosed in Fig. 10a wherein a solid block constituting a plurality of black dots regions are illustrated. However, Fig. 10a is the two-zone representation (display) of each graphic symbol, rather than the Mnemonic aid, for selection. Moreover, Fig. 10a has some solid block, but not a rectangular solid block, formed by a plurality black regions, after selection of the regions and thereby is not even related to the claimed "solid block" during the selection of the regions constructed for a mnemonic aid. Only Figs. 5-9 are employed during the selection of the regions as Mnemonic aids.

Applicant's claims require the identification of remainder of the regions/zones versus the combination of the selected regions/zones in a Mnemonic aid. In the visualization of the selected regions or zones, the contrasting colors of the regions or zones play an important role in the identification of the remainder regions/zones or the selected regions/zones. In applicant's

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specification, the selected regions or zones are indicated white while the other unselected regions or zones are visualized as black regions, and still other intervening white spaces or white regions remain within the rectangular block (See Figs. 5-9), during the selection of the one or more regions or zones from a plurality of regions or zones. With respect to the Mnemonic aids of the Figs. 5-9, it cannot be said that the collection of the black regions or zones forms a rectangular solid block before and during selection of the regions or zones. The contrasting colors determine the visualization or identification of the selection of the one or more regions or zones to be contrasted with the remainder of the regions or zones. The contrasting colors determine the desired alphanumeric character to be generated. Applicant cannot possibly ignore the contrasting colors, the white regions/zones before and during the selection of the one or more regions or zones. Although some of the white regions/zones are transformed to black regions/zones during the display of the generated alphanumeric symbols in Fig. 10a, it cannot be said that the collection of the black regions or zones forms a solid block or rectangular solid block.

**Claims 1-7:**

The claim 1 recites the claim limitation of “receiving a user’s selection of a combination of one or more zones from a plurality of zones, wherein the plurality of zones are shaped and arranged so as to abut one another thereby eliminating intervening spaces to essentially form a rectangular solid block.”

The claims 1-7 are subject to the same rationale of rejection set forth in the claims 21-28 and 33.

**Claims 29-32:**

The claim 29 recites the claim limitation of “a respective combination of one or more regions selected from a matrix of regions that have been defined on the display screen as abutting one another to eliminate intervening spaces and form a control area that is essentially a solid block, via a user’s manual action upon the touch-sensitive display screen”.

During the selection of the one or more regions, there are no solid block shown, as evidenced by applicant’s specification. See Figs. 5-9 of applicant’s specification.

The claims 29-32 are thus subject to the same rationale of rejection set forth in the claims 21-28 and 33.

Additionally, applicant’s claimed “regions” and “zones” are different from one embodiment to another embodiment. For example, the regions and zones in Fig. 10a are clearly different from the regions and zones in Figs. 5-9. However, applicant argues collectively with respect to all the embodiments in the applicant’s specification.

Finally, according to applicant’s argument, claimed regions and/or zones do not refer to the zones in the 12-zone matrix set forth in Paragraph 0030 of applicant’s specification, but rather referring to the features. In contrary to applicant’s argument that the examiner raises the issue to confuse the applicant, the applicant’s claims and specification are inconsistent and thus confusing.

For example, in Paragraph 0030 of applicant’s specification, it is stated, “there may be 19 different features needed to compose all the letters of...a template or matrix is created based on

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the entire set of features, by **abutting the features** to each other in such a way that each feature can be **visually distinguished** from the others. *This template may then be overlayed with a **smaller**, second matrix (e.g., a 12-zone matrix)...* Each character is indicated by a respective selection of one or more (and in most cases, no more than two) regions or zones in a matrix.” In Paragraph 0038, it is stated, “almost all of the assembled features are ‘stretched’ so that they abut one another, eliminating the intervening spaces and thereby resulting in a stretched matrix 208 in Fig. 2. Note also that the stretched features become the boundaries of the regions in the matrix 208 in such a way that most of the regions line up in rows and columns.” However, Fig. 2 shows 19 features. *The 19 features, rather than the selection regions*, have been stretched so that they abut one another, eliminating the intervening spaces. Moreover, according to applicant’s Figs. 7, 8a and 9, the regions (the 12-zone matrix) are constructed with intervening spaces with the contrasting colors, and there is no way to form “a solid block” or essentially “a solid block” with the regions due to the separation of the regions in the 12-zone matrix (See Fig. 9 of applicant’s specification) and also due to the separation of the 12 zones by some of the 19 features.

It is also uncertain what applicant is meant by the claimed zones and/or regions and what regions or zones in any of the Figs. 5-10a of applicant’s specification should correspond to the claimed regions and/or zones.

**Due to the §112 rejection discussed above, the limitations set forth in the claim invention carry no patentable weights for the reasons of the enablement and description requirements set forth in the §112 rejection. Moreover, the claim invention is subject to the broadest reasonable interpretation consistent with applicant’s specification.**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 21-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramian U.S. Patent Application Publication No. 2004/0239624 (hereinafter Ramian), in view of Curtin et al US Patent No. 4,727,357 (hereinafter Curtin).

Re Claims 1, 21-26, 29-30 and 33:

(a) Ramian teaches a method for generating a desired alphanumeric character, comprising:

Receiving a user's selection of a combination of one or more zones from a plurality of zones (*In Ramian, receiving a user's selection of some zones also indicates that a user's selection of the other zones as the other zones are contrasted with the traced zones and therefore, the other zones are also selected and meeting the claim limitation of a combination of one or more zones*), wherein the plurality of zones are shaped and arranged so as to abut one another, thereby eliminating intervening spaces to essentially form a rectangular solid block, some of the plurality of zones being ones that, once contrasted with others of the plurality of zones, highlight an open curve feature of a character via a complementary, rather than direct, relationship, some others of the plurality of zones being ones that highlight, once contrasted with

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others of the plurality of zones, a closed curve feature of a character via a complementary, rather than direct, relationship (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149); and

Contrasting the combination with the remainder of said plurality of zones so that the remainder (*In Ramian, the other zones are contrasted with the remainder of the other zones or the traced zones*), and not the combination, comprises one or more open curve features and/or one or more closed curve features, of the desired character, which have been highlighted by the user's selection of the combination of zones (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

(b) However, Ramian does not explicitly teach the remainder resembles the desired character. Ramian discloses the zones other than the traced zones are contrasted with the traced zones and the traced zones are the remainder, which resembles the desired character.

(c) Curtin teaches the claim limitation of "the remainder, and not the combination, comprises one or more open curve features and/or one or more closed curve features, of the desired character, which have been highlighted by the user's selection of the combination of zones".

For example, Curtin discloses in Fig. 6 un-selecting the bars 14 and 16 so that the remainder bars 6, 8, 10, 12, 20, 18, 22 and 24 represent or resemble the desired character "A". See column 2, lines 46-67 and column 3, lines 1-20. It is stated, "...**a user contacts selected normally activated bars to turn off their lights**. It has been found in developing the present invention that **the alphanumeric characters can be more rapidly formed by placing at least the bars forming the outer box pattern and possibly the bars extending horizontally across**

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**such box pattern in a normally activated condition. In this manner, it normally takes fewer key strokes to form each alphanumeric character.”** That is to say, the bars, 6, 8, 10, 12, 20, 18, 22, 24, 14, 16 are normally lighted. The alphanumeric character “A” is formed with a fewer key strokes on the bars 14, 16 to deactivate the lights. Curtin thus discloses the claim limitation of receiving a user’s selection of a combination of one or more zones from a plurality of zones, wherein the plurality of zones are shaped and arranged so as to abut one another, thereby eliminating intervening spaces to essentially form a rectangular solid block, some of the plurality of zones being ones that, once contrasted with others of the plurality of zones, highlight an open curve feature of a character via a complementary, rather than direct, relationship, some others of the plurality of zones being ones that highlight, once contrasted with others of the plurality of zones, a closed curve feature of a character via a complementary, rather than direct, relationship. See also column 4, lines 30-67 and column 5, lines 34-44.

(d) It would have been obvious to one of ordinary skill in the art at the time the invention was made to have come up with the claimed invention in view of Curtin and Ramian. Moreover, Ramian’s plurality of zones other than the traced zones correspond to applicant’s combination of one or more zones from the plurality of zones and Ramian’s selection of the traced zones corresponds to applicant’s remainder of the plurality of zones. Ramian teaches that, if the combination is contrasted with the remainder of said plurality of zones. For example, the characters “a” and “z” in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of zones by illuminating the curves within such combination which must be contrasted with the remainder of zones so that the drawn curves resemble the



desired character (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

On the other hand, in Ragain, by positively illuminating the curves within a combination of one or more zones from a plurality of zones, Ragain thereby selects the untraced zones as applicant's combination of one or more zones from a plurality of zones and therefore Ragain implicitly teaches contrasting the untraced zones with the traced zones so that the untraced zones is essentially removed leaving behind a graphic symbol that resembles the desired character. It is noted that Ragain's untraced zones correspond to applicant's combination and Ragain's traced zones correspond to applicant's remainder. It is also noted that both remainder and the combination represent one or more zones from a plurality of zones and the remainder and the combination added together are the same as the plurality of zones.

Ragain teaches selecting curves and traces along a selected plurality of zones for generating graphic symbols with the stylus so that the traced zones indicate the desired character by illuminating the selected curves and traces with the selected plurality of zones and therefore the untraced zones can be essentially removed leaving behind a graphic symbol that resembles the desired character because the untraced zones are not illuminated and thus also selected except the illuminated curves/traces is not highlighted and thus is also selected. Therefore, the untraced zones meet the claim limitation of a combination of one or more zones.

Moreover, Ragain teaches the untraced zones are contrasted with the remainder area of said plurality of zones not including the illuminated curves and traces. For example, the characters "a" and "z" in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person that the respective curves/traces within the zones by illuminating the curves must be

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contrasted with the untraced zones so that the drawn curves resemble the desired character (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

Therefore, in view of Curtin's patent, which has been issued long time ago, one of the ordinary skill in the art would have used Curtin's idea of selecting a combination of one or more bars to be deactivated while the remainder remain illuminated. Having the combined teaching of Curtin and Ragain, one of the ordinary skill in the art would have selected a combination of one or more zones of Ragain so that the untraced zones are illuminated instead, while the traced zones are un-illuminated or deactivated from illumination, in view of Curtin so that the untraced region is essentially removed leaving behind a graphic symbol that resembles the desired character such as the character "A". Since Curtin's bars are in contact with each other, Curtin further discloses the claim limitation that the plurality of zones abut one another, thereby eliminating intervening spaces to essentially form a rectangular solid block (See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44).

(e) One of the ordinary skill in the art would have been motivated to construct a method for generating alphanumeric characters in accordance with Curtin's selection of the combination of bars so that the remainder represents the desired alphanumeric character (See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44).

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## Claim 2:

The claim 2 encompasses the same scope of invention as that of the claim 1 except additional claim limitation that the plurality of zones are arranged so that the periphery around them is the maximum extent of every graphic symbol that appears when a combination of one or more zones is contrasted. However, Ramian and Curtin further disclose the claim limitation of the plurality of zones are arranged so that the periphery around them is the maximum extent of every graphic symbol that appears when a combination of one or more zones is contrasted (*Ramian teaches selecting curves and traces along a selected plurality of zones for generating graphic symbols with the stylus so that the remainder of the unselected areas of the plurality of zones indicate the desired character by illuminating the selected curves and traces with the selected plurality of zones and therefore the remainder resembles the desired character because the remainder of the zones except the illuminated curves/traces is not highlighted. Moreover, Ramian teaches the combination is contrasted with the remainder area of said plurality of zones not including the illuminated curves and traces. For example, the characters "a" and "z" in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of curves/traces within the zones by illuminating the curves within such combination which must be contrasted with the remainder area of zones so that the drawn curves resemble the desired character. See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149). See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.*

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Claim 3:

The claim 3 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of the plurality of zones forming a matrix of solid elements that are of the same color. However, Ramian and Curtin further disclose the claim limitation of the plurality of zones forming a matrix of solid elements that are of the same color (Figs. 1-3). See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

Claim 4:

The claim 4 encompasses the same scope of invention as that of the claim 3 except additional claim limitation of the matrix having twelve zones arranged in four rows and three columns. However, Ramian and Curtin further disclose the claim limitation of the matrix having twelve zones arranged in four rows and three columns (Figs. 1-2). See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

Claim 5:

The claim 5 encompasses the same scope of invention as that of the claim 3 except additional claim limitation that the respective combination of zones has no more than two zones, and wherein each one of the 26 letters of the English alphabet and 10 decimal numerals is

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represented by a different combination of zones. However, Ramian and Curtin further disclose the claim limitation that the respective combination of zones has no more than two zones, and wherein each one of the 26 letters of the English alphabet and 10 decimal numerals is represented by a different combination of zones (*This is because the character "z" can be traced within one zone of the matrix and all the English alphabets and 10 decimal numerals can be represented by the matrix; See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 0139, 0147, 0149).* See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

## Claim 6:

The claim 6 encompasses the same scope of invention as that of the claim 3 except additional claim limitation of providing a plurality of mnemonic aids that represent a plurality of different alphanumeric characters, wherein each aid being depicted by a matrix of the plurality of zones that shows the respective combination. However, Ramian and Curtin further disclose the claim limitation of providing a plurality of mnemonic aids that represent a plurality of different alphanumeric characters, wherein each aid being depicted by a matrix of the plurality of zones that shows the respective combination (*See Figs. 1-3; Paragraph 007, 0030, 0043, 0072, 0085, 0108, 0109, 0130, 0139, 0147, 0149).* See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input

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method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

Claim 7:

The claim 7 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of visually contrasting a combination of one or more of said plurality of zones with unselected ones of said plurality of zones, as the combination is being selected by a person. However, Ramian and Curtin further disclose the claim limitation of visually contrasting a combination of one or more of said plurality of zones with unselected ones of said plurality of zones, as the combination is being selected by a person. Ramian discloses visually contrasting the combination of zones with the selected curves/traces illuminated with the unselected zones un-illuminated wherein the combination of the zones are selected by a person with for example a stylus (*See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 0139, 0147, 0149*). See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

Re Claims 27-28 and 31-32:

Ramain and Curtin teach that, if the combination is contrasted with the remainder of said plurality of zones. For example, the characters “a” and “z” in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of zones by illuminating the curves within such combination which must be contrasted with the remainder of zones so that the drawn the curves resemble the desired character (*See Figs. 1-3; Paragraph 007, 0030,*

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00430072, 0085, 0108, 0109, 0130, 01390147, 0149). See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected zones for generating graphic symbols with the stylus so that the remainder of the unselected zones resembles the desired character because Romain teaches selecting curves and traces along a selected plurality of zones for generating graphic symbols with the stylus so that the remainder of the unselected areas of the plurality of zones indicate the desired character by illuminating the selected curves and traces with the selected plurality of zones and therefore the remainder resembles the desired character because the remainder of the zones except the illuminated curves/traces is not highlighted. Moreover, Romain teaches the combination is contrasted with the remainder area of said plurality of zones not including the illuminated curves and traces. For example, the characters "a" and "z" in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of curves/traces within the zones by illuminating the curves within such combination which must be contrasted with the remainder area of zones so that the drawn curves resemble the desired character (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

Curtin teaches the claim limitation of "the combination is essentially removed leaving behind a graphic symbol that resembles the desired character". For example, Curtin discloses in Fig. 6 un-selecting the bars 14 and 16 so that the remainder bars 6, 8, 10, 12, 20, 18, 22 and 24 represent or resemble the desired character "A". See column 2, lines 46-67 and column 3, lines

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1-20. It is stated, "...a user contacts selected normally activated bars to turn off their lights. It has been found in developing the present invention that **the alphanumeric characters can be more rapidly formed by placing at least the bars forming the outer box pattern and possibly the bars extending horizontally across such box pattern in a normally activated condition. In this manner, it normally takes fewer key strokes to form each alphanumeric character.**" That is to say, the bars, 6, 8, 10, 12, 20, 18, 22, 24, 14, 16 are normally lighted. The alphanumeric character "A" is formed with a fewer key strokes on the bars 14, 16 to deactivate the lights. See also column 4, lines 30-67 and column 5, lines 34-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Romain's invention because Romain's remainder of the plurality of zones corresponds to applicant's combination of one or more zones from the plurality of zones and Romain's selection of the plurality of zones corresponds to applicant's remainder of the plurality of zones. Romain teaches that, if the combination is contrasted with the remainder of said plurality of zones. For example, the characters "a" and "z" in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of zones by illuminating the curves within such combination which must be contrasted with the remainder of zones so that the drawn curves resemble the desired character (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

On the other hand, in Romain, by positively illuminating the curves within a combination of one or more zones from a plurality of zones, Romain thereby selects the remainder of the plurality of zones as applicant's combination of one or more zones from a plurality of zones and therefore Romain implicitly teaches contrasting Romain's remainder with the Romain's



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combination of said plurality of zones so that the remainder is essentially removed leaving behind a graphic symbol that resembles the desired character. It is noted that Remain's remainder corresponds to applicant's combination and Remain's combination corresponds to applicant's remainder. Applicant has effectively reversed the Remain's parts. It is also noted that both remainder and the combination represent one or more zones from a plurality of zones and the remainder and the combination added together are the same as the plurality of zones.

Ramain teaches selecting curves and traces along a selected plurality of zones for generating graphic symbols with the stylus so that the combination of the plurality of zones indicate the desired character by illuminating the selected curves and traces with the selected plurality of zones and therefore the remainder can be essentially removed leaving behind a graphic symbol that resembles the desired character because the remainder of the zones except the illuminated curves/traces is not highlighted and thus is also selected. Therefore, the remainder may also be the combination and vice versa.

Moreover, Ramian teaches the combination is contrasted with the remainder area of said plurality of zones not including the illuminated curves and traces. For example, the characters "a" and "z" in Fig. 2 are drawn within a plurality of zones so that it can suggest to a person the respective combination of curves/traces within the zones by illuminating the curves within such combination which must be contrasted with the remainder area of zones so that the drawn curves resemble the desired character (See Figs. 1-3; Paragraph 007, 0030, 00430072, 0085, 0108, 0109, 0130, 01390147, 0149).

Therefore, in view of Curtin's patent, which has been issued long time ago, one of the ordinary skill in the art would have used Curtin's idea of selecting a combination of one or more

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bars to be deactivated while the remainder remain illuminated. Having the combined teaching of Curtin and Ragain, one of the ordinary skill in the art would have selected a combination of one or more zones of Ragain so that the remainder is illuminated while the combination of one or more zones being selected to be un-illuminated or deactivated from illumination in view of Curtin so that the combination is essentially removed leaving behind a graphic symbol that resembles the desired character such as the character "A" (See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44).

One of the ordinary skill in the art would have been motivated to construct a method for generating alphanumeric characters in accordance with Curtin's selection of the combination of bars so that the remainder represents the desired alphanumeric character (See Curtin Figs. 1, 6 for how the characters being entered. Fig. 5 contains the system having the processor, RAM & ROM for processing the character input method. Column 2, lines 46-67, column 3, lines 1-20, column 4, lines 30-67, column 5, lines 34-44).

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw

A handwritten signature in black ink, appearing to read "Jin-Cheng Wang", written in a cursive style.